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Vicki Collins

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Date: March 7, 2001

Vicki Collins  
(Signature of person mailing paper)

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re PATENT APPLICATION of	)	Group Art Unit: Unassigned
	)	Atty. Docket No. 172.2USDC2
Arimilli et al.	)	Examiner: Unassigned
	)	
Serial No: Continuation of 09/247,497	)	
	)	
Filed: March 7, 2001	)	
	)	
Title: NUCLEOTIDE ANALOGS	)	

### PRELIMINARY AMENDMENT

Box Patent Application  
Assistant Commissioner for Patents  
Washington, D.C. 20231

Dear Sir:

Please amend this application as follows:

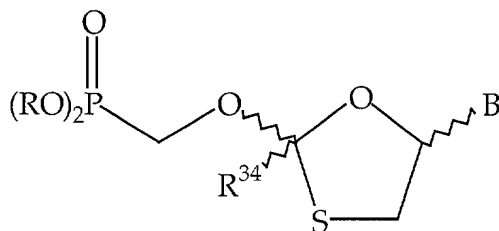
#### In the Specification

After the title on page 1 of the specification insert "This application is a continuation application of U.S.S.N. 09/247,497, filed February 10, 1999, now pending, which is a continuation application of 09/071,420, filed May 1, 1998, now abandoned, which is a divisional application of 08/617,849 filed May 6, 1996, now Patent No. 5,798,340, which is a continuation application of PCT/US94/10539, filed September 16, 1994, which is a continuation-in-part application of 08/193,341, filed February 8, 1994, now abandoned, which is a continuation-in-part application of 08/123,483, filed September 17, 1993, now Patent No. 5,656,745.

# In the Claims

Cancel claims 1-51 without prejudice and substitute new claim 52:

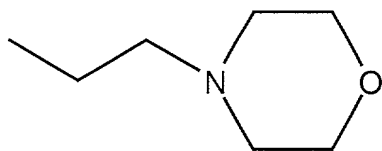
--52. A compound of the formula 2



2

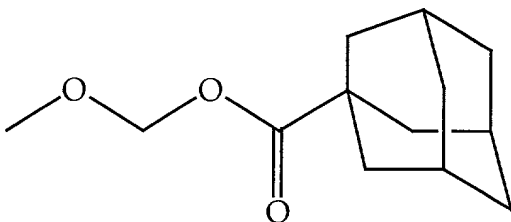
wherein R<sup>34</sup> is H, CH<sub>2</sub>CN, CF<sub>3</sub>;

R independently is phenyl, 2- and 3-pyrrolyl, 2- and 3-thienyl, 2- and 4-imidazolyl, 2-, 4- and 5-oxazolyl, 3- and 4-isoxazolyl, 2-, 4- and 5-thiazolyl, 3-, 4- and 5-isothiazolyl, 3- and 4-pyrazolyl, 2-, 3- and 4-pyridinyl, 2-, 4- and 5-pyrimidinyl, 2-, 3- and 4-alkoxyphenyl (C<sub>1</sub>-C<sub>12</sub> alkyl), 2-, 3- and 4-halophenyl, 2,3-, 2,4-, 2,5-, 2,6-, 3,4- and 3,5-dihalophenyl, 2-, 3- and 4-haloalkylphenyl (1 to 5 halogen atoms, C<sub>1</sub>-C<sub>12</sub> alkyl), 2-, 3- and 4-cyanophenyl, carboalkoxyphenyl (C<sub>1</sub>-C<sub>4</sub> alkyl), 1-, 2-, 3-, and 4-pyridinyl (-C<sub>5</sub>H<sub>4</sub>N), 2-, 3- and 4-nitrophenyl, 2-, 3- and 4-haloalkylbenzyl (1 to 5 halogen atoms, C<sub>1</sub>-C<sub>12</sub> alkyl), alkylsalicylphenyl (C<sub>1</sub>-C<sub>4</sub> alkyl), 2-,3- and 4-acetylphenyl, -O-C<sub>10</sub>H<sub>6</sub>-OH, -O-C<sub>10</sub>H<sub>6</sub>-O-, -O-C<sub>6</sub>H<sub>4</sub>-C<sub>6</sub>H<sub>4</sub>-O- (both oxygen atoms are linked to the phosphorus atom), alkoxy ethyl (C<sub>1</sub>-C<sub>6</sub> alkyl), phenoxymethyl, aryloxy ethyl (C<sub>6</sub>-C<sub>9</sub> aryl or C<sub>6</sub>-C<sub>9</sub> aryl substituted by OH, NH<sub>2</sub>, halo, C<sub>1</sub>-C<sub>4</sub> alkyl or C<sub>1</sub>-C<sub>4</sub> alkyl substituted by OH or by 1 to 3 halo atoms), -C<sub>6</sub>H<sub>4</sub>-CH<sub>2</sub>-N(CH<sub>3</sub>)<sub>2</sub>, N-ethylmorpholino



( ; -(CH<sub>2</sub>)<sub>2</sub>-N[(CH<sub>2</sub>)<sub>2</sub>(CH<sub>2</sub>)<sub>2</sub>]O),

adamantoyl oxymethyl, pivaloyloxy(methoxyethyl)methyl  
(-CH(CH<sub>2</sub>CH<sub>2</sub>OCH<sub>3</sub>)-O-C(O)-C(CH<sub>3</sub>)<sub>3</sub>),



( ; -O-CH<sub>2</sub>-O-C(O)-C<sub>10</sub>H<sub>15</sub>), pivaloyloxymethyl (-CH<sub>2</sub>-O-C(O)-C(CH<sub>3</sub>)<sub>3</sub>), pivaloyloxy(methoxymethyl)-methyl (-CH(CH<sub>2</sub>OCH<sub>3</sub>)-O-C(O)-C(CH<sub>3</sub>)<sub>3</sub>), pivaloyloxyisobutyl (-CH(CH(CH<sub>3</sub>)<sub>2</sub>)-O-C(O)-C(CH<sub>3</sub>)<sub>3</sub>) isobutyryloxymethyl (-CH<sub>2</sub>-O-C(O)-CH<sub>2</sub>-CH(CH<sub>3</sub>)<sub>2</sub>), cyclohexanoyl oxymethyl (-CH<sub>2</sub>-O-C(O)-C<sub>6</sub>H<sub>11</sub>), phenyl (-C<sub>6</sub>H<sub>5</sub>), benzyl (-CH<sub>2</sub>-C<sub>6</sub>H<sub>5</sub>), isopropyl (-CH(CH<sub>3</sub>)<sub>2</sub>), t-butyl (-C(CH<sub>3</sub>)<sub>3</sub>), -CH<sub>2</sub>-CH<sub>3</sub>, -(CH<sub>2</sub>)<sub>2</sub>-CH<sub>3</sub>, -(CH<sub>2</sub>)<sub>3</sub>-CH<sub>3</sub>, -(CH<sub>2</sub>)<sub>4</sub>-CH<sub>3</sub>, -(CH<sub>2</sub>)<sub>5</sub>-CH<sub>3</sub>, -CH<sub>2</sub>-CH<sub>2</sub>F, -CH<sub>2</sub>-CH<sub>2</sub>Cl, -CH<sub>2</sub>-CF<sub>3</sub>, -CH<sub>2</sub>-CCl<sub>3</sub>, R<sup>5</sup>, NHR<sup>6A</sup> or N(R<sup>6A</sup>)<sub>2</sub>;

wherein R<sup>5</sup> is CH<sub>2</sub>C(O)N(R<sup>6A</sup>)<sub>2</sub>, CH<sub>2</sub>C(O)OR<sup>6A</sup>, CH<sub>2</sub>OC(O)R<sup>6A</sup>, CH(R<sup>6A</sup>)OC(O)R<sup>6A</sup>, CH<sub>2</sub>C(R<sup>6A</sup>)<sub>2</sub>CH<sub>2</sub>OH, CH<sub>2</sub>OR<sup>6A</sup>, NH-CH<sub>2</sub>-C(O)O-CH<sub>2</sub>CH<sub>3</sub>, N(CH<sub>3</sub>)-CH<sub>2</sub>-C(O)O-CH<sub>2</sub>CH<sub>3</sub>, NHR<sup>40</sup>, CH<sub>2</sub>-O-C(O)-C<sub>6</sub>H<sub>5</sub>, CH<sub>2</sub>-O-C(O)-C<sub>10</sub>H<sub>15</sub>, -CH<sub>2</sub>-O-C(O)-CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>-O-C(O)-CH(CH<sub>3</sub>)<sub>2</sub>, CH<sub>2</sub>-O-C(O)-C(CH<sub>3</sub>)<sub>3</sub>, CH<sub>2</sub>-O-C(O)-CH<sub>2</sub>-C<sub>6</sub>H<sub>5</sub>;

wherein R<sup>6A</sup> is C<sub>1</sub>-C<sub>20</sub> alkyl which is unsubstituted or substituted by substituents independently selected from the group consisting of OH, O, N and halogen (1 to 5 halogen atoms), C<sub>6</sub>-C<sub>20</sub> aryl which is unsubstituted or substituted by substituents independently selected from the group consisting of OH, O, N and halogen (1 to 5 halogen atoms) or C<sub>7</sub>-C<sub>20</sub> aryl-alkyl which is unsubstituted or substituted by substituents independently selected from the group consisting of OH, O, N and halogen (1 to 5 halogen atoms), provided that for compounds of formulas N(R<sup>6A</sup>)<sub>2</sub>, CH<sub>2</sub>C(O)N(R<sup>6A</sup>)<sub>2</sub>, CH<sub>2</sub>C(O)OR<sup>6A</sup>, CH<sub>2</sub>OC(O)R<sup>6A</sup>, CH(R<sup>6A</sup>)OC(O)R<sup>6A</sup> and CH<sub>2</sub>C(R<sup>6A</sup>)<sub>2</sub>CH<sub>2</sub>OH, the total number of carbon atoms present is less than 25;

wherein R<sup>40</sup> is C<sub>1</sub>-C<sub>20</sub> alkyl; and

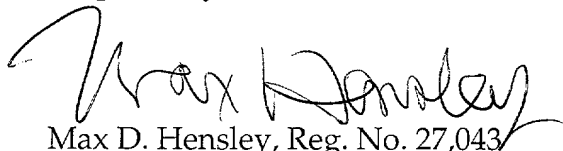
B is a 1-pyrimidinyl residue selected from cytosinyl, 5-halocytosinyl, and 5-(C<sub>1</sub>-C<sub>3</sub>-alkyl)cytosinyl.--

#### Remarks

An Information Disclosure Statement with accompanying references will be submitted upon issuance of a filing receipt. If the examiner has not received the Information Disclosure Statement or the references, the examiner is invited to telephone the undersigned to arrange for their dispatch.

This application is believed to be in condition for examination.

Respectfully submitted,



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